

NEWS TODAY

India and Iran signed Long Term Bilateral Contract for operation of terminal at Chabahar Port

10 year contract was signed for development of Shahid Beheshti Port Terminal at Chabahar Port.

- This will enhance regional connectivity; facilitate trade and investment opportunities between India, Iran and Afghanistan.
 - ⊖ Chabahar is one of the overseas ports that will be managed by India. The other is Sittwe port in Myanmar.

About Chabahar Port

- It is located in Sistan and Baluchestan province on the Makran coast in South-eastern part of Iran, on the Gulf of Oman and outside Strait of Hormuz.
- It is the only deep-sea port in Iran with direct ocean access.
- There are two terminals in Chabahar Port project i.e. Shahid Beheshti and Shahid Kalantari.
- Port is part of proposed International North-South Transport Corridor (INSTC).
 - ⊖ INSTC is a 7,200-km-long multi-mode transport project linking Indian Ocean and Persian Gulf to Caspian Sea via Iran and onward to northern Europe via Saint Petersburg in Russia.

Significance of Chabahar Port for India

- Counter-balance Pakistan's Gwadar Port and China's Belt and Road Initiative and provide access to Afghanistan and Central Asia.
- Easy access from India's west coast i.e. Kandla Port (Gujarat) are only 550 Nautical Miles from Chabahar.
- Shorter route will aid to unlock India's trade potential with European countries.



Challenges in execution of Chabahar Project

- US Sanctions on Iran impacts equipment suppliers and partners for completion of project.
- Proposed China's involvement in Chabahar's duty-free zone hampers India's interests.

Venezuela may be the first nation to lose all its glaciers

According to the International Cryosphere Climate Initiative (ICCI), the Humboldt (or La Corona) - Venezuela's last standing glacier in the Andes, has shrunk to a size that no longer qualifies it as a glacier.

- ICCI is a network of experts and researchers collaborating with governments and organizations to preserve the Earth's cryosphere.
- Cryosphere includes snow and ice on land, ice caps, glaciers, permafrost, and sea ice.

A glacier is an accumulation of ice and snow that slowly flows over land.

- Glaciers are melting at a fast rate mainly due to global warming, warming of ocean water etc.
- Both Alpine (e.g. Hindu Kush Himalaya) and Ice sheets (e.g. Antarctica) have been impacted.

Impacts of Glacier Melting

- **Sea Level Rise:** As per NASA, if all glaciers and ice sheets melted, global sea level would rise by more than 60 meters.
 - ⊖ It will increase coastal erosion and elevate storm surge.
- **Biodiversity Loss:** Walrus are losing their home and polar bears are spending more time on land, causing higher rates of conflict between people and bears.
- **Disasters:** Frequency of Glacial lake outbursts (GLOFs) in regions like Himalayas will increase.
- **Other:** Reduction in water availability in rivers like Ganges, economic activities like fishing and navigation will be impacted etc.

Steps Taken to protect Glaciers'

- **Global**
 - ⊖ Hindu Kush Himalayan Monitoring and Assessment Programme (HIMAP) launched by the International Centre for Integrated Mountain Development (ICIMOD).
 - ⊖ UNESCO's World Glacier Monitoring Services.
 - ⊖ Year 2025 has been declared as International Year of Glacier Preservation by the United Nations.
- **India**
 - ⊖ National Mission for Sustaining Himalayan Ecosystem.
 - ◆ It is part of the National Action Plan on Climate Change (NAPCC), launched in 2008.
 - ⊖ Research station 'Himansh' was established in the Chandra basin (Himachal Pradesh) in 2016.

First Human recipient of a Genetically Modified Pig Kidney Transplant has died

Xenotransplantation is any procedure that involves transplantation, implantation, or infusion of live non-human animal cells, tissues, or organs into a human recipient.

- Need for such procedure was felt because of **gap between number of transplantations needed by patients and availability of donor organs.**

Why are Pigs often used for Xenotransplantation?

- Pig's **organ size, physiological metabolism and immune system are similar** to those of human beings.
 - ⊕ **Organs that can be used for xenotransplantation** includes Heart, Liver, Lungs, etc.
 - ⊕ In 2022, the **first xenotransplantation** of a genetically-modified **pig heart** was done.
- Breeding pigs on farms is **widespread and cost-effective.**
- Varieties of pig breeds are farmed, providing an **opportunity for harvested organs to be matched with specific needs** of human recipient.

Process of Xenotransplantation

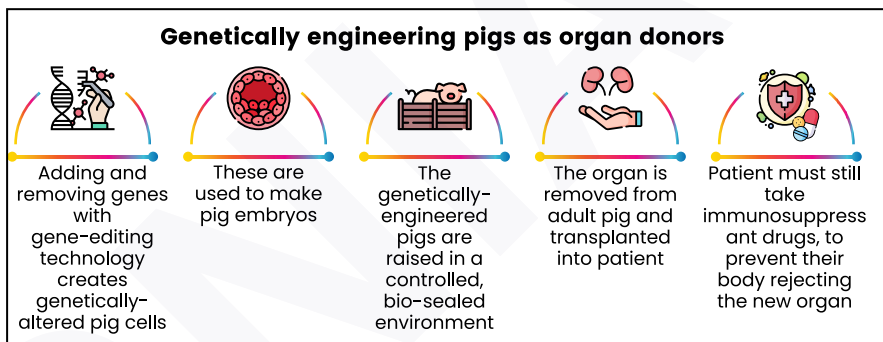
- Gene Editing Technology **CRISPR-Cas9** was utilized to **eliminate specific pig genes** responsible for producing sugars triggering immune responses.
- It **introduces specific human genes to enhance organ (kidney, heart) compatibility** with humans.

Benefits of Xenotransplantation

- **Alternative supply of organs** to those with life-threatening diseases.
- Reduce **shortage of transplantable organs.**

Concerns

- High **Organ rejection rate; Risk of infection** from an animal organ; Animal welfare, etc.



United Nations Office on Drugs and Crime (UNODC) released World Wildlife Crime Report 2024

Key findings

- During 2015-2021, **rhinoceroses and cedars** were **most impacted animal and plant species** respectively.
- **Largest numbers of seizures** reported during 2015- 2021 involved **corals, followed by crocodylians and elephants.**
- For seizures of animal species, there is **gradual increase from 2015–2019** and then **decline in 2020 and 2021.**
- For seizures of plant species, there is **sharp increase in 2020 and 2021.**

Wildlife crime

- It can be defined as taking, possession, trade or movement, consumption of wild animals and plants or their derivatives in contravention of any international, regional, or national legislation(s).

Factors driving wildlife crime

- **Demand for medicine, pets, bushmeat, ornamental plants** etc.
- **Huge profits earned** by illegal traders by selling exotic animals, plants, and their parts. Eg. Rhinoceros horn, etc.
- **Corruption undermines government restrictions** on wildlife harvest, trade and use, thus enabling wildlife crime.

Impact of Wildlife Crime

- **Environmental:** Overexploitation and reduced populations of wildlife species; Increasing invasive alien species etc.
 - ⊕ Out of all seized fauna, **40% were either threatened or near-threatened on red list.**
- **Economical:** Money-laundering and illegal cross-border financial flows.
- **Social: Risks of disease transmission** to people from live animals, plants, wildlife meat; Degradation of services like food, medicines, energy, etc.

Steps taken to combat Wildlife Crime

- **Global**
 - ⊕ **UNODC's Global Programme for Combating Wildlife and Forest Crime, 2014.**
 - ◆ UNODC was established in 1997 in Vienna (Austria), to fight against illicit drugs and organised crime.
 - ⊕ **Wildlife Crime Initiative** to respond to global poaching crisis.
 - ◆ It is a strategic partnership between **TRAFFIC**, wildlife trade monitoring network and **World Wildlife Fund.**
- **India**
 - ⊕ **Wildlife (Protection) Act, 1972** provides for forfeiture of any equipment, vehicle or weapon that is used for committing wildlife offence(s).
 - ⊕ **Wildlife Crime Control Bureau** was established under **Ministry of Environment and Forests** to combat organized wildlife crime.

China becomes India's top trading partner in FY 2024

According to the think tank **Global Trade Research Initiative (GTRI)**, India's bilateral trade with China reached at **\$118.4 billion** in the fiscal year 2024.

- China replaced the United States (US) which was India's top trading partner during FY22 and FY23.
- GTRI's Report also highlighted that Between FY19 and FY24, India's exports to China witnessed a marginal decline in exports by 0.6%, while imports from China surged by 44.7%.

Concerns related to rising import Dependency on China

- National Security:** Trade can be used as a tool to exert political pressure on India or advance its strategic interests.
 - It complicates efforts to address **border disputes** effectively.
 - Reliance on Chinese **technology** and **equipment in critical sectors** such as telecom will make more vulnerable to **cyber warfare**.
 - China's share in India's electronics sector import (including telecom) is about **43.9%**.
 - Strategic autonomy:** Constrains India's ability to counter **Chinese influence** in neighbourhood (e.g. South Asia and Indian Ocean region).
 - Supply chain vulnerability:** India's pharmaceutical sector is highly dependent on China's Active Pharmaceutical Ingredients (APIs).
 - Other:** Stifle the growth of domestic industries as they are not able to compete with low-cost import, etc.

Initiatives taken to reduce Dependency on China

- Make in India** initiative
- Production-linked incentive (PLI) schemes** for domestic manufacturing capacities in critical sectors like Medical devices, electronic components, etc.
- Promotion of **Bulk Drug Parks**, reducing import dependency for APIs
- Imposing **Anti-dumping duties**

To read more about India and China's Trade Relations kindly refer to the **News Today article 'Trade gap between India and China continues to widen' of 23rd April, 2024**

UNESCO's MOW Asia-Pacific Regional Register includes Indian literary Works

Manuscript of three Indian literary works namely **Ramcharitmanas, Panchatantra** and **Sahridayāloka-Locana** have been included in **Memory of the World (MOW) Asia-Pacific Regional Register** along with 17 other works from region.

- The decision was taken at the 10th meeting of the **Memory of the World Committee for Asia and the Pacific (MOWCAP)**, held at Ulaanbaatar, Mongolia.

About Literary Works

- Ramcharitmanas**
 - Written in the **16th Century** by **Goswami Tulsidas**.
 - An epic poem written in **Awadhi language** and consists of **Seven Kāndas**.
 - Poetic retelling** of the events of **Ramayana**.
- Panchatantra**
 - Written by Pt. **Vishnu Sharma** in **Sanskrit**.
 - One of the **oldest collection of surviving Indian Fables**
 - Consists of five parts** and its most distinguishing feature is the **'Story within story'** structure.
- Sahridayāloka-Locana**
 - Written by **Acharya Anandvardhan** in **Sanskrit** and is a text of Indian Poetics.
 - Philosopher **Abinava Gupta** has **written a commentary** on it.

About MoW Programme

- Launched** in 1992.
- It consists of **three Registers** namely, International, Regional and National Register.
 - International Register** consists of several Indian entries namely Tamil Medical Manuscript Collection, Saiva manuscripts Rig Veda etc.
- It aims to**
 - Preserve **world's documentary heritage**
 - Enable **universal access** to documentary heritage and
 - Enhance public awareness** about documentary heritages

Also in News



Leopard Cat

Leopard cat (*Prionailurus bengalensis*) is sighted in Maharashtra's Pench Tiger Reserve for the first time.

About Leopard cat

- Forest-dwelling cat belongs to the **family Felidae**, noted for its leopard-like colouring.
- Distribution:** Found across India, Southeast Asia, and nearby islands.
- Characteristics:** Coat is yellowish or reddish brown above, white below, and heavily marked with dark spots and streaks. It is a Nocturnal animal.
- Habitat:** tropical rainforest to temperate broadleaf forest, coniferous forest, shrub forest, grasslands.
- Conservation status**
 - IUCN:** Least Concern
 - CITES:** Appendix I
 - Wild Life (Protection) Act, 1972:** Schedule I



High Energy Photon Source (HEPS)

China is planning to construct a High Energy Photon Source (HEPS).

- This will put China among the few countries that have **fourth-generation synchrotron light sources**.
- Currently around 70 synchrotrons are scattered across the world. But only a few countries have fourth-generation synchrotrons such as Sweden, Brazil, France etc.

About HEPS

- First Brightest Synchrotron X-Rays in Asia.
 - Synchrotrons** use electricity to produce **intense beams of light** more than a million times brighter than the sun.
- Rely on an array of magnets called a **multi-bend achromat lattice** to generate X-ray beams that are narrower and therefore brighter.
- Benefits:** Will help researchers' to understand matter in the dimensions of space, time, and energy, as well as at the level of molecules, atoms, electrons, and spin.

Indus-1 was India's synchrotron.

- India is also an **associate member** of the **European Synchrotron Radiation Facility (ESRF)** based in Grenoble, France.

India International Bullion Exchange (IIBX)

State Bank of India has become the first trading-cum-clearing member at IIBX.

About IIBX

- Established at **GIFT International Financial Services Centre (IFSC)**, Gandhinagar, Gujarat in 2022.
- **Regulated by IFSC Authority (IFSCA).**
- **Promoted by India's leading market infrastructure institutions** like National Stock Exchange, Multi Commodity Exchange of India etc.
- **Benefits**
 - ⊕ **Gateway to import bullion** into India.
 - ⊕ **Provide world class bullion exchange ecosystem** to promote bullion trading, investment in bullion financial products and vaulting facilities in IFSCs.
- **Bullion** refers to **physical gold and silver of high purity** that is often kept in form of bars, ingots, or coins.

Semal Trees (Silk Cotton Tree)

Disappearance of **Semal trees** from Southern Rajasthan is creating adverse effects on the forests and people.

About Semal Trees

- It is a **large deciduous tree**, known for its **Crimson red flowers**.
- **Ayurvedic medicines** can be prepared from every part of the tree.
 - ⊕ For instance, roots are used for treating ailments such as diabetes, etc.
- It is worshipped by **many tribal communities** in Rajasthan and Madhya Pradesh.
- Its seed produces edible oil, used in making soaps.

Keeling Curve

Global average concentration of carbon dioxide (CO₂) was 4.7 parts per million (ppm) in March 2024 (higher than March 2023), signifying **large spike in Keeling Curve**.

- It is the **largest ever recorded leap in CO₂ concentration** at 425.22 ppm.

About Keeling Curve

- It is the **record of atmospheric CO₂ from Mauna Loa Observatory (MLO)**, since 1958.
 - ⊕ MLO is a station that **measures the elements in atmosphere that contribute to climate change**.
 - ⊕ It is **located in Hawaii on the side of Mauna Loa**, the world's largest active volcano.
- It is named after **Dr. Charles David Keeling**.

PM Gati Shakti

Ministry of Labour and Employment has boarded the **PM Gati Shakti** portal to identify and bridge gaps in social security coverage.

About PM Gati Shakti

- Also known as **National Master Plan for Multimodal Connectivity** launched in **2021**.
- It is a digital platform to bring **16 ministries including railways and roadways** together.
- **Purpose:**
 - ⊕ **Integrated planning and coordinated implementation** of infrastructure connectivity projects.
 - ⊕ **Provide connectivity** for movement of people, goods, and services from one mode of transport to another.
 - ⊕ **Reduce travel time** for people.
- It is based on **6 pillars** i.e. Comprehensiveness, Prioritization, Optimization, Synchronization, Analytical, and Dynamic.

Nancy Grace Roman Space Telescope

NASA's Nancy Grace Roman Space Telescope aims to explore everything from our outer solar system to the edge of the observable universe.

About Telescope

- **Objective:** Focus on dark energy and dark matter, exoplanets, and a wide range of infrared astrophysics and planetary science topics.
- **Key instruments: Wide Field and Coronagraph Instrument**
- It will use **microlensing** to study exoplanets.
 - ⊕ **Microlensing** is a form of **gravitational lensing** in which the light from a **background source is bent** by the gravitational field of a **foreground lens** to create distorted, multiple and/or brightened images.
- It will have a field of view at least **100 times larger than Hubble telescope**.

Aurora

The night sky over Hanle village in Ladakh was illuminated by northern lights as an intense solar storm hit the Earth.

About Aurora

- **Multi-coloured lights appear in upper atmosphere** (ionosphere) over the Polar Regions and are visible from locations in the middle and high latitudes.
 - ⊕ Colours can be blue, red, yellow, green, and orange.
- Aurora in **Northern Hemisphere** is called **aurora borealis** and **aurora australis** in **Southern Hemisphere**.
- **Caused by the interaction of solar wind with oxygen and nitrogen gas** in atmosphere.

Places in News **Croatia (Capital: Zagreb)**

Incumbent Croatian Prime Minister has secured office for third consecutive time

Political Features

- Located in **South Eastern Europe** and is a part of **Balkan Peninsula**.
- **Bounded by Hungary and Slovenia** (North), **Serbia** (East), **Bosnia and Herzegovina** (Both in South and East) and **Adriatic Sea** (West).

Geographical Features

- **Major Mountain Range:** Dinaric Alps, known for **Karst (limestone)** topography.
- **Highest Point:** Dinara
- **Major Rivers:** Sava and Drava

